

C l a i m s

1. Device (1) comprising:

- a communication system transmitter (30) for transmitting signals via a radio interface in a first frequency band;
- a receiver (10) for receiving signals via a radio interface in a second frequency band, said receiver (10) including an attenuation component (13) for attenuating signals received by said receiver (10); and
- a controlling portion (50) setting an attenuation which is applied by said attenuating component (13) to signals received by said receiver (10) to a higher value in case said communication system transmitter (30) is transmitting signals with a power level exceeding a certain value, and setting an attenuation which is applied by said attenuating component (13) to signals received by said receiver (10) to a lower value in case no signal is transmitted by said communication system transmitter (30).

2. Device (1) according to claim 1, wherein said communication system transmitter (30) includes a variable amplifier (32) for amplifying signals which are to be transmitted by said communication system transmitter (30), and wherein said controlling portion (50) sets said attenuation which is applied by said attenuating component (13) to signals received by said receiver (10) to a value which

increases with an increasing amplification factor of an amplification applied by said variable amplifier (32) to signals which are to be transmitted by said communication system transmitter (30).

3. Device according to claim 1 or 2, wherein said device comprises a communication system section including said communication system transmitter and a receiver section including said receiver receiving signals in a second frequency band, and wherein said controlling portion is located in at least one of said communication system section and said receiver section.
4. Device according to claim 3, wherein said controlling portion includes at least a part of a processor provided in said communication system section and at least a part of a processor provided in said receiver section.
5. Device according to one of the preceding claims, wherein said receiver receiving signals in said second frequency band further includes an automatic gain control component, and wherein said controlling portion combines information from said automatic gain control component and information from a communication system section including said communication system transmitter for determining an attenuation to be set.
6. Device (1) according to one of the preceding claims, wherein said controlling portion (13) determines an attenuation to be set based on at least one of the

power level of signals transmitted by said communication system transmitter (30) and the power level of signals received by said receiver receiving signals in said second frequency band.

7. Device (1) according to one of the preceding claims, further comprising a communication system receiver (40) for receiving signals in said first frequency band, wherein said controlling portion (13) determines an attenuation to be set based on the power level of signals received by said communication system receiver (40).
8. Device according to claim 7, wherein said controlling portion determines an attenuation to be set based in addition on the power level of signals received by said receiver receiving signal in said second frequency band.
9. Device (1) according to one of the preceding claims, wherein said attenuating component (13) comprises a variable gain attenuator, and wherein said variable gain attenuator (13) applies at least part of said set attenuation to a signal received by said receiver (10) by varying an attenuation applied by said variable gain attenuator (13) to said received signal.
10. Device (1) according to claim 9, wherein said receiver (10) receiving signals in said second frequency band further includes an amplifier (12) for amplifying signals received via an antenna (15) of said device (1), and a processing portion (14) for

processing signals amplified by said amplifier (12), and wherein said variable gain attenuator (13) is arranged between said amplifier (12) and said processing portion (14).

11. Device (1) according to one of the preceding claims, wherein said attenuating component (13) is integrated with at least one other component (12,14) of said receiver (10) receiving signals in said second frequency band in an integrated circuit (16).
12. Device according to one of claims 1 to 11 wherein said attenuating component is implemented in a dedicated integrated circuit, which dedicated integrated circuit is external to other components of said receiver receiving signals in said second frequency band.
13. Device according to one of the preceding claims, wherein said attenuating component comprises a variable amplifier, wherein said variable amplifier applies at least part of said set attenuation to a signal received by said receiver by varying an amplification factor of an amplification applied by said variable amplifier to said received signal.
14. Device according to one of the preceding claims, further comprising an antenna which is connected to said receiver receiving signals in said second frequency band, wherein said attenuating component comprises a component applying at least part of said set attenuation to a signal received by said receiver by detuning said antenna.

15. Device according to one of the preceding claims, wherein said attenuating component comprises a component applying at least part of said set attenuation to a signal received by said receiver receiving signals in said second frequency band by reducing at least for one component of said receiver a supplied operation voltage.
16. Device (1) according to one of the preceding claims, wherein said receiver (10) receiving signals in said second frequency band further includes a first converting component for converting a received radio frequency signal into an intermediate frequency signal and a second converting component for converting an intermediate frequency signal output by said first converting component into a baseband signal, and wherein said attenuating component (13) applies said set attenuation to a signal received by said receiver (10) at least at one of a radio frequency, an intermediate frequency and a baseband frequency.
17. Method for improving the performance of a receiver (10), which receiver (10) is combined in a single device (1) with a communication system transmitter (30) transmitting signals via a radio interface in a first frequency band, and which receiver (10) receives signals via a radio interface in a second frequency band, said method comprising attenuating a signal received by said receiver (10) with a higher attenuation, in case said communication system transmitter (30) is transmitting signals with a power

level exceeding a certain value, and attenuating a signal received by said receiver (10) with a lower attenuation, in case no signal is transmitted by said communication system transmitter (30).

18. Method according to claim 17, wherein said communication system transmitter (30) amplifies signals for transmission with a variable amplification factor, and wherein signals received by said receiver (10) receiving signals in said second frequency band are attenuated with an attenuation which is increased with an increasing amplification factor used by said communication system transmitter (30) for amplifying signals for transmission.
19. Method according to one of claims 17 or 18, wherein for determining an attenuation to be used, information provided by an automatic gain control for said receiver and information provided by a communication system section including said communication system transmitter is combined.
20. Method according to one of claims 17 to 19, wherein an attenuation to be used is determined based on at least one of the power level of signals transmitted by said communication system transmitter (30) and the power level of signals received by said receiver receiving signals in said second frequency band.
21. Method according to one of claims 17 to 20, wherein an attenuation to be used is determined based on the power level of signals received by a communication

system receiver (40) of said device (1) in said first frequency band.

22. Method according to claim 21, wherein an attenuation to be used is determined based in addition on the power level of signals received by said receiver receiving signal in said second frequency band.
23. Method according to one of claims 17 to 22, wherein signals received by said receiver (10) receiving signals in said second frequency band are attenuated by an attenuation applied by a variable gain attenuator (13).
24. Method according to one of claims 17 to 23, wherein signals received by said receiver receiving signals in said second frequency band are attenuated by reducing an amplification applied to said signals.
25. Method according to one of claims 17 to 24, wherein signals received by said receiver receiving signals in said second frequency band are attenuated by detuning an antenna forwarding signals to said receiver.
26. Method according to one of claims 17 to 25, wherein signals received by said receiver receiving signals in said second frequency band are attenuated by reducing at least for one component of said receiver a supplied operation voltage.
27. Method according to one of claims 17 to 26, wherein signals received by said receiver (10) receiving

signals in said second frequency band are attenuated at least at one of a radio frequency, an intermediate frequency and a baseband frequency.